

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A suction valve for a small hermetic compressor of the type presenting a compression cylinder (1), which has an end closed by a valve plate (2), said valve comprising a flexible vane (10) which is shaped so as to present: a fixation end portion (11) to be affixed to the valve plate (2); a bending median portion (12) provided with a median opening (13) aligned with a discharge orifice (3); and a sealing end portion (14) operatively associated with the suction orifice (4) provided in the valve plate (2), characterized in that the distance between an external edge (15) of the flexible vane (10) and its adjacent internal edge portion (16) of the median opening (13) diminishes, progressively, along a higher bending region (17) of the flexible vane (10) of the valve, from a maximum value, close to the end fixation portion (11), to a minimum value, close to the boundary of the higher bending region (17) of the flexible vane (10); (10), said flexible vane (10), presenting in its bending median portion (12) and in its sealing end portion (14), a "U" shape with the legs being united by the fixation end portion (11).
2. (Original) A suction valve, according to claim 1, characterized in that the width of the median opening (13) of the flexible vane (10) increases, progressively, from a region adjacent to the fixation end portion (11) to at least the opposite boundary of the higher bending region (17), whereas the total width of the flexible vane (10) diminishes from the fixation end portion (11), at an initial portion, and then it begins to progressively increase towards the sealing end portion 14, from before the opposite boundary of the higher bending portion 17.
3. (Original) A suction valve, according to claim 2, characterized in that the median opening (13) of the valve presents, along the higher bending region (17), a substantially semi-elliptical contour with its vertex being tangent with the fixation end portion (11).
4. (Original) A suction valve, according to claim 3, characterized in that the median opening (13) of the flexible vane (10) presents a substantially oval contour, with its axis coinciding with the axis of the valve.

5. (Original) A suction valve, according to claim 1, characterized in that the distance between the external edge (15) and the internal edge (16) diminishes more intensely close to the fixation end portion (11) than along the rest of the higher bending region (17).

6. (Original) A suction valve, according to claim 1, characterized in that the higher bending region (17) extends from the region of the fixation end portion (11) until about 50% the length of the flexible vane (10).

7. (Original) A suction valve, according to claim 1, characterized in that the width (L) of the higher bending region (17) is determined by the equation $L/L_0 = ax^4 + bx^3 + cx^2 + dx + 1$, where L_0 is the maximum width; the coefficients a, b, c and d are defined according to rigidity and bending parameters of the flexible vane (10); and x is the ratio C/C_0 , where C is an extension of the higher bending region (17) measured from the boundary of the fixation end portion (11) and C_0 is the length of the higher bending region (17).

8. (Original) A suction valve, according to claim 1 and in which the flexible vane (10) is cut from a support blade (6), in order to have its external edge (15) spaced from an adjacent cutting edge (7) defined in said support blade (6) by a gap (8), characterized in that the gap (8) is larger in its region adjacent to the fixation end portion (11) of the flexible vane (10).